

ABSTRACT

**METHOD AND APPARATUS FOR PROCESSING
EMPTY FRUIT BUNCHES (EFB)**

A method and apparatus of processing empty fruit bunches (EFB) where the method comprising the steps of depositing empty fruit bunches (EFB) into a process chamber, processing the empty fruit bunches (EFB) to yield byproducts, subjecting the byproducts of the processed empty fruit bunches (EFB) to heating and condensation processes at different stages and collecting the byproducts of the processed empty fruit bunches (EFB) at the different stages of the heating and condensation processes. The byproducts comprise of carbonaceous solid fuel product, liquid chemical product, and a flammable gas product. A bioreactor (100) is provided to manage a process of converting empty fruit bunches (EFB) into byproducts, comprising a vertical process chamber (1) for processing the empty fruit bunches (EFB), a combustion chamber (5) for heating a flow of air directed to the process chamber wherein the flow of hot air in a jacket (1a) of the process chamber heats up the empty fruit bunches (EFB) to produce hot vapours and a distillation apparatus for condensing hot vapours generated from the heating of the empty fruit bunches (EFB) to produce byproducts.

FIGURE 1